



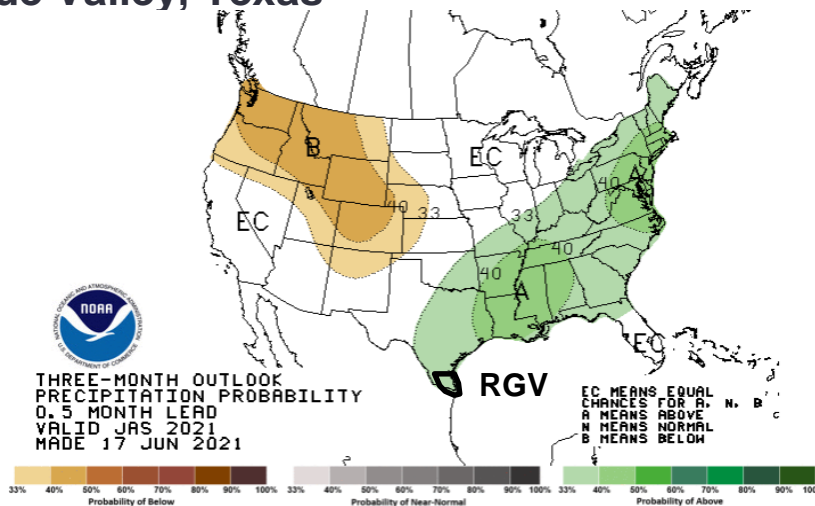
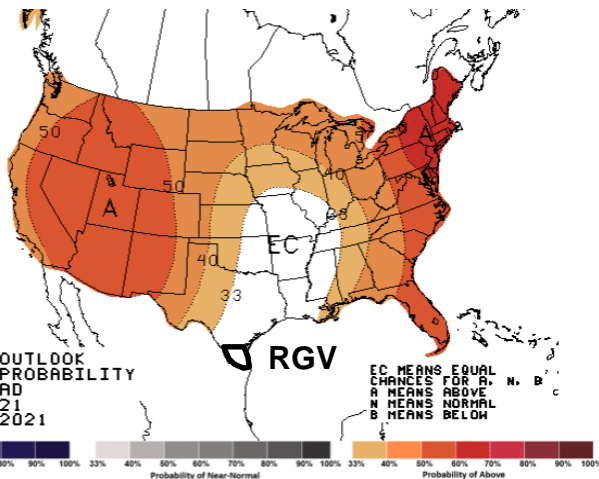
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NOAA July-September (Late Summer) 2021 Outlook Perspective for the Rio Grande Valley/Deep S. Texas Region

July 1, 2021

Barry Goldsmith, NWS Brownsville/Rio Grande Valley, Texas



Key Takeaways

- “La Canícula” may only setup on occasion. The position of the ridge will favor the southwest U.S./Sonora-Baja Mexico
- Confidence Increasing in the following:
 - **Drought should remain “out”** through July; August will depend on whether tropical moisture can reach the RGV. If expected cyclones track across the central/eastern Gulf, August and September could see **dryness and low-end drought** resume.
 - **Dangerous “feels like” temperatures could reach/exceed 110°F** on occasion in July and August, but trends suggest more “normal” conditions overall
 - Falcon Reservoir **remains low to very low to start July**. Tropical or other atmospheric waves could change that equation – rapidly – at any time.
 - Could 2021 provide the ***fourth* consecutive flood** event in late summer? *Impossible to predict specifics*, but it cannot be ruled out given forecast.



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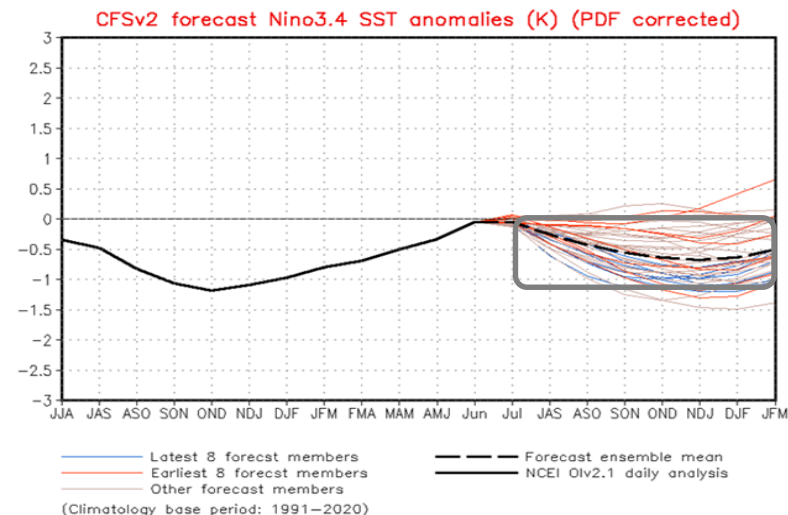
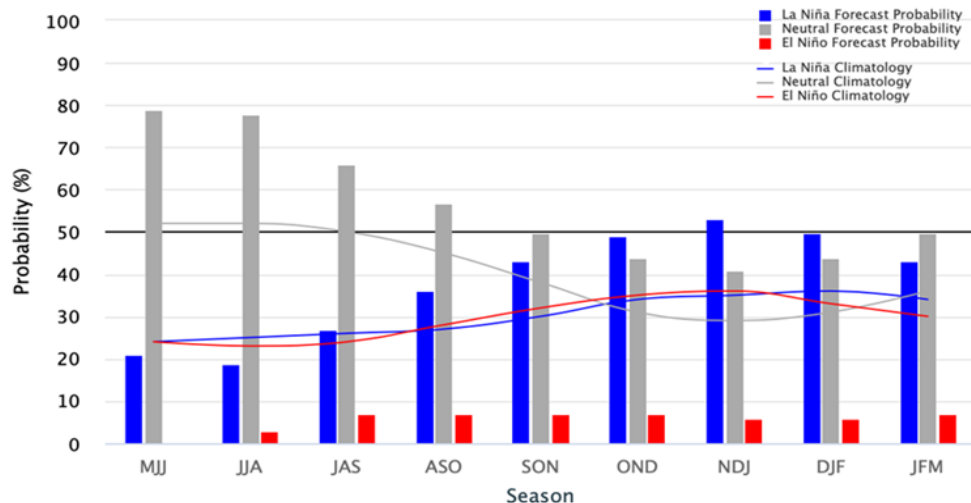
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The “Why” of the Forecast: Neutral-Weak La Niña

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7								

Early-June 2021 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5 °C to 0.5 °C



Neutral-Weak La Niña alone does not provide enough information for accurate summer rainfall forecasts

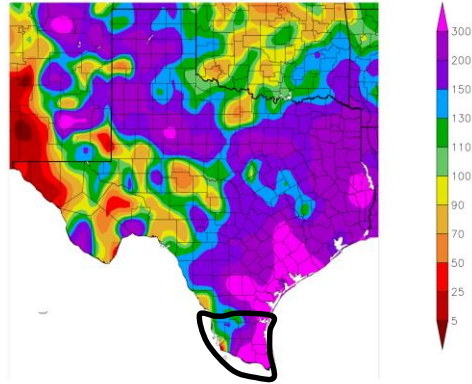


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Dryness Flipped to Wetness in May; Early June Held

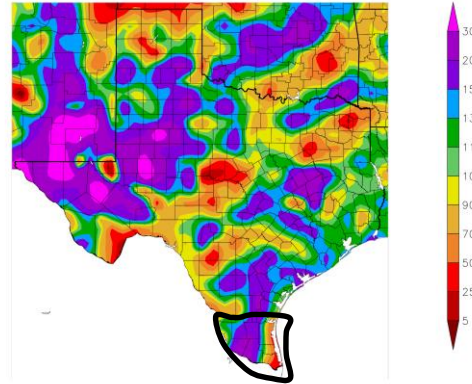
Percent of Normal Precipitation (%)
5/1/2021 – 5/31/2021



Generated 6/20/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

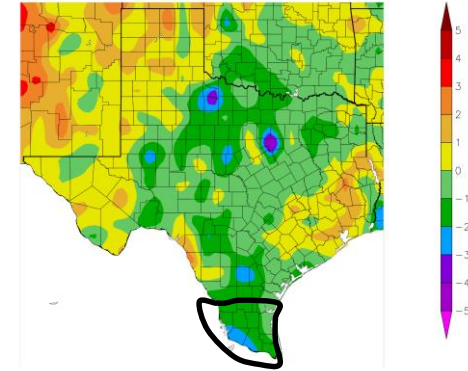
Percent of Normal Precipitation (%)
6/1/2021 – 6/30/2021



Generated 7/1/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
6/1/2021 – 6/30/2021



Generated 7/1/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

- May and June flipped the drought switch for the region. For the second two weeks of June, Hidalgo County was in a **solid moisture surplus**.
- The deeper soil moisture helped **reduce daytime heating**, as energy went into evaporation.
- Temperatures were below the **new average** for both months. Raw values for the period ranked among the Top 25 and 35% warmest on record (Brownsville and Harlingen), and in the top 50% coolest on record (McAllen).
- Wildfire spread threats remained **low to very low**.

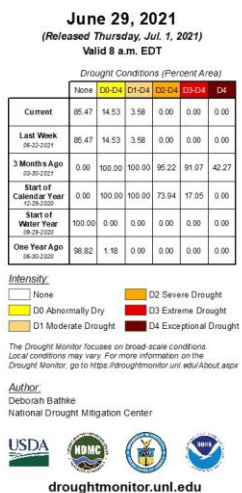
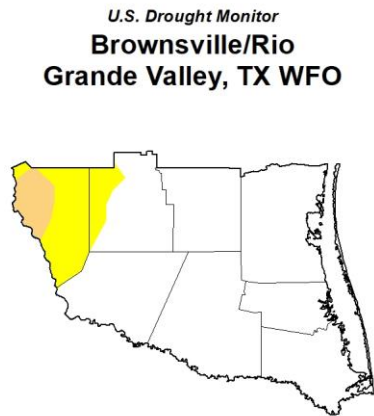
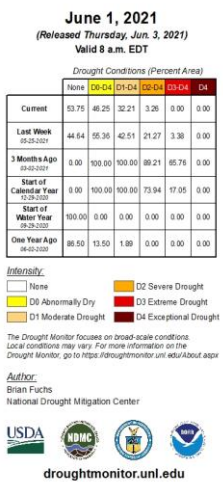
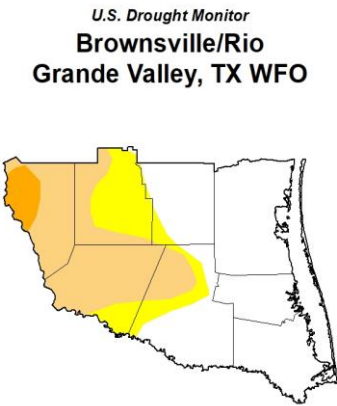
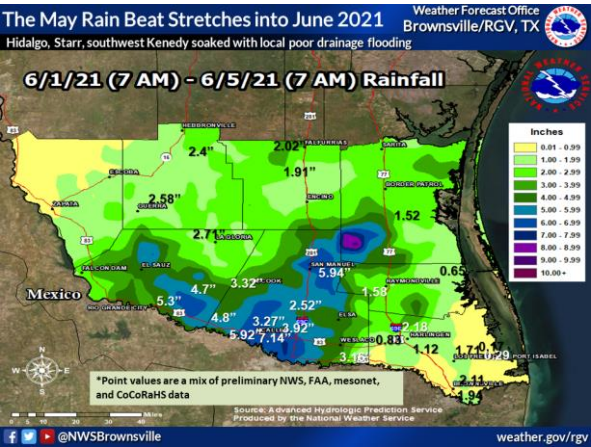


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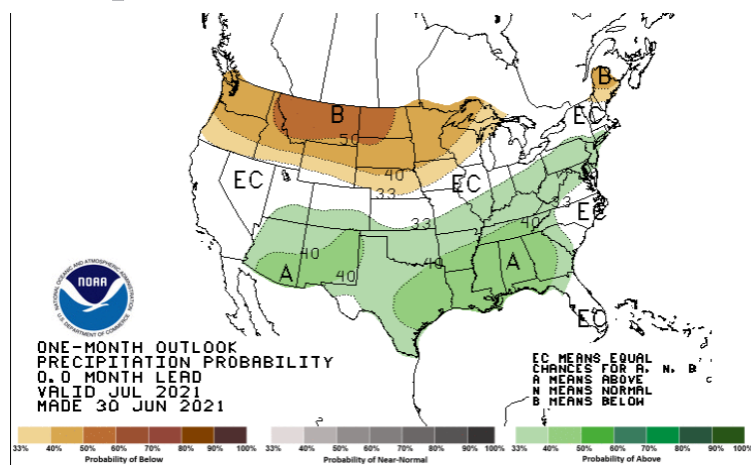
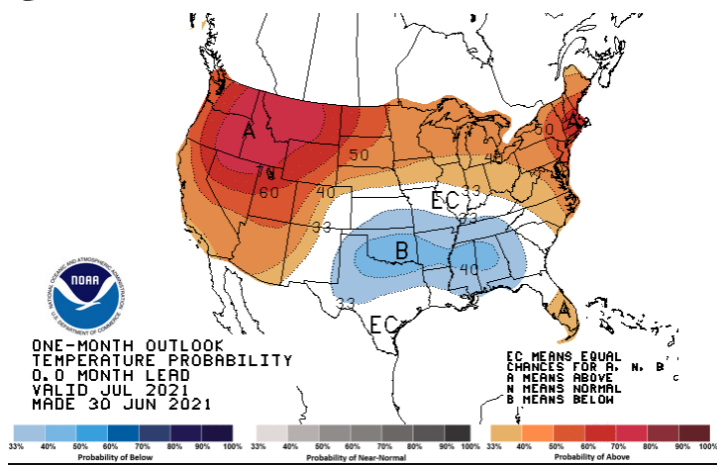
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Most Dryness/Drought Erased in June



The final heavy rain event (June 1-4) across the Valley finished off dryness/drought for nearly all areas. Only northwest Zapata retained moderate levels at month's end.

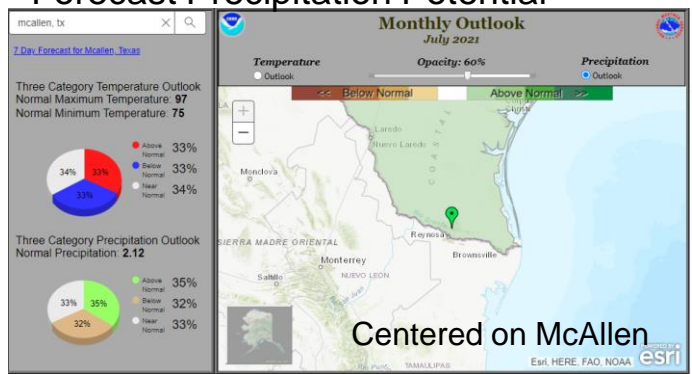
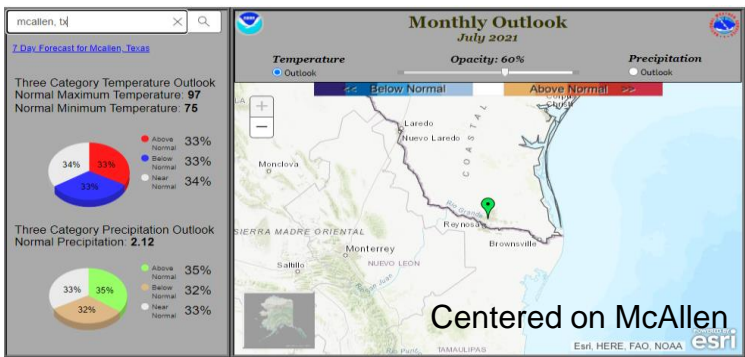
July Outlook – 6/30/2021 Update



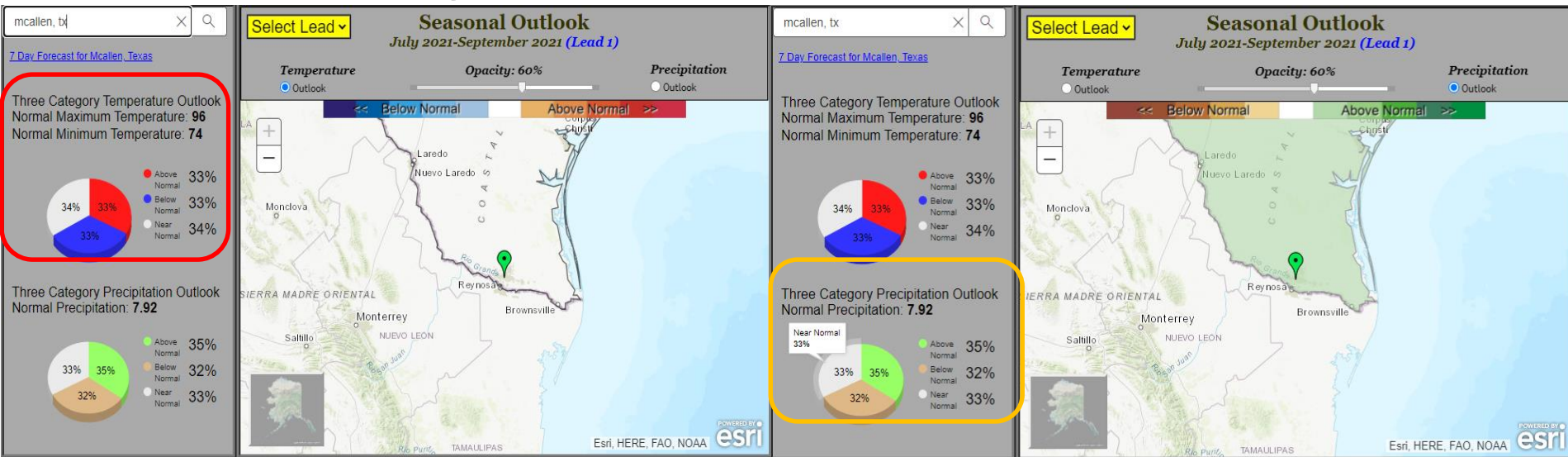
Forecast Temperature Departure

Forecast Precipitation Potential

Avg. Afternoon
Temp: 97 to 103
Avg. Morning
Temp: Upper
70s
Avg. Rainfall: 1
to 1.5 inches



The July-September 2021 Outlook: Rio Grande Valley (McAllen as Anchor Point)



- **Temperature: Equal Chances of Above/Below/Average** Seasonal average – Afternoons 97 to 103 (July/August); 92 to 97 (September). Mornings: Upper 70s (July/August), falling to the upper 60s-lower 70s (end of September)
- **Rainfall: 35% probability of above average** (~32/33% for all categories) Seasonal average: 8 to 10 inches (majority in September)



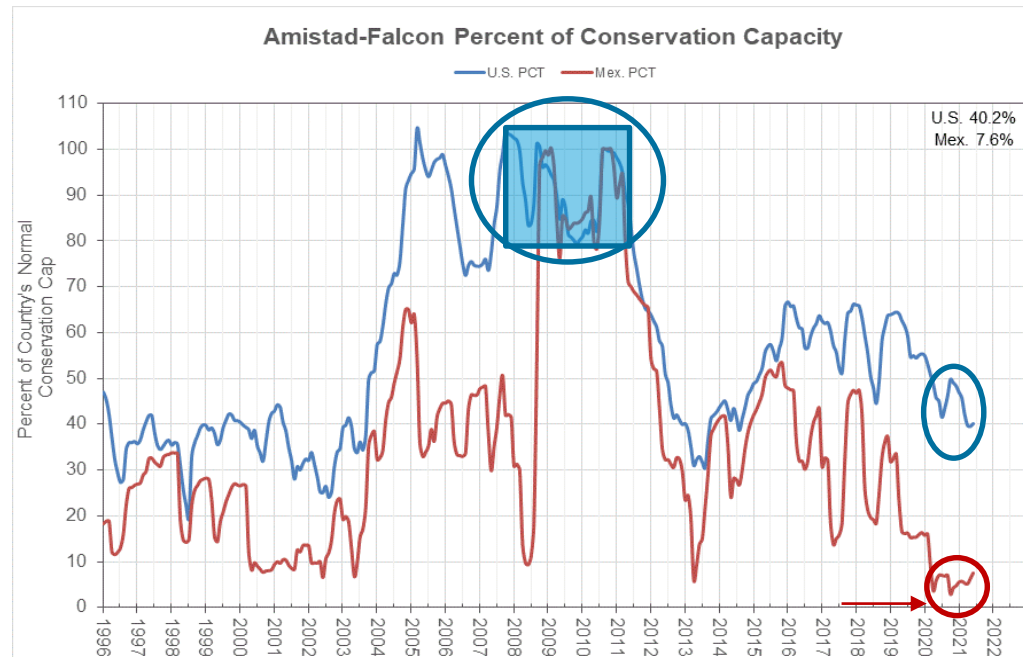
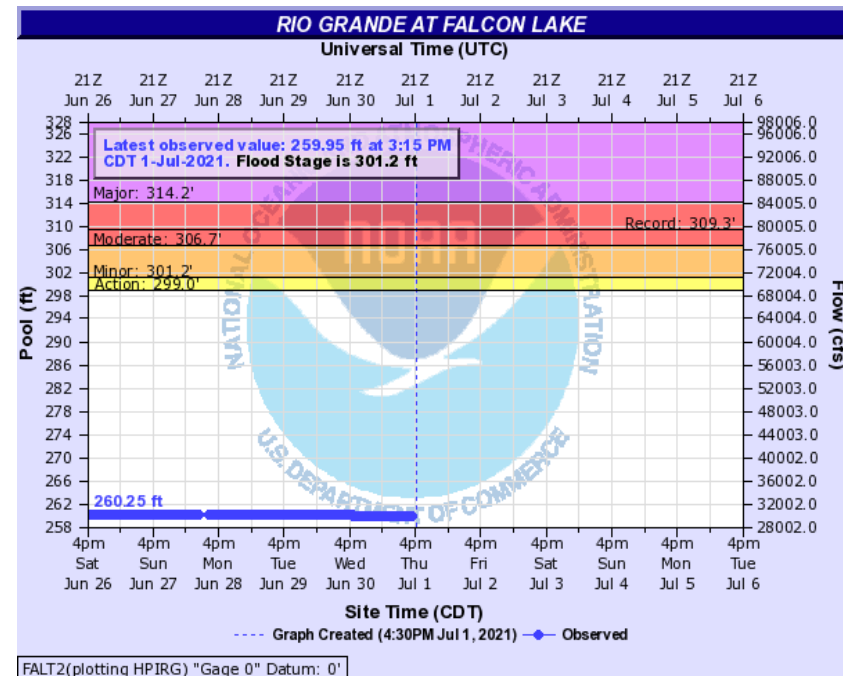
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Falcon Reservoir, Rising Soon?

Heavy rain in July-September could help



- July 1, 2021 total capacity, Falcon Reservoir: **17 percent**
- July 2011 total capacity, Falcon Reservoir: around **59 percent**

Still Among Lowest in Sample

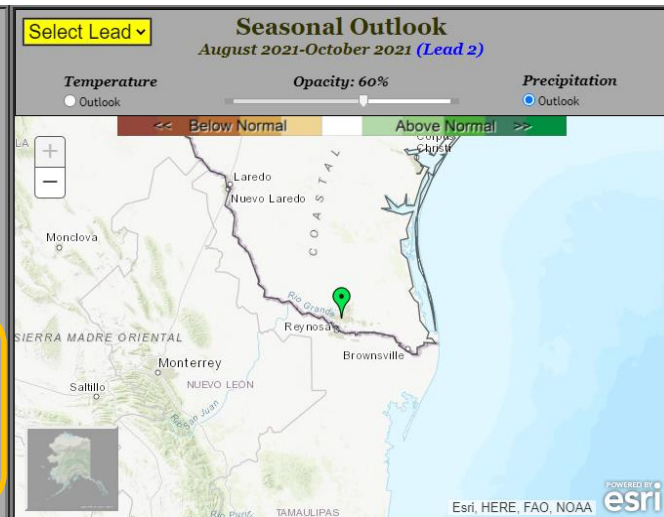
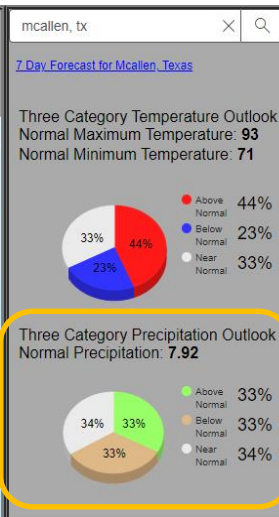
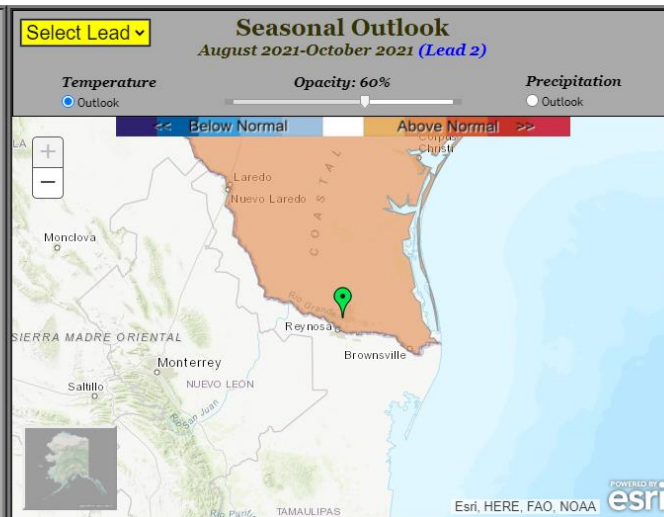
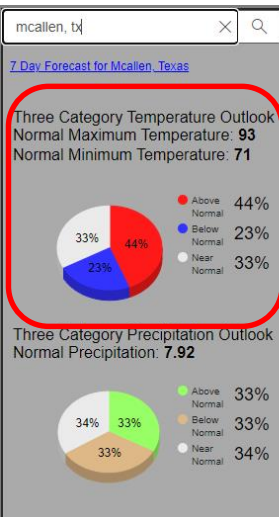


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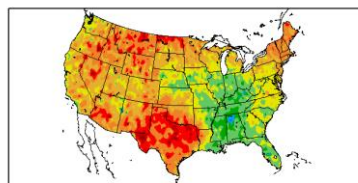
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August-October Outlook: Return of Heat?



More confidence in warmer than average temperatures, though a 2011 repeat is looking unlikely given the July 2021 starting point

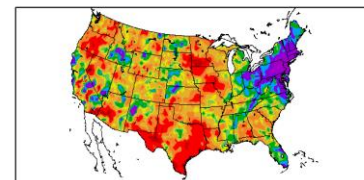
Departure from Normal Temperature (°F)
8/1/2011 – 10/31/2011



Generated 6/15/2012 at HPRCC using provisional data. Regional Climate Centers

Low confidence in the rainfall forecast heading into the peak of the 2021 Hurricane Season. “La Canicula” is not expected for any prolonged period with the upper ridge parked farther west than in 2011.

Percent of Normal Precipitation (%)
8/1/2011 – 10/31/2011



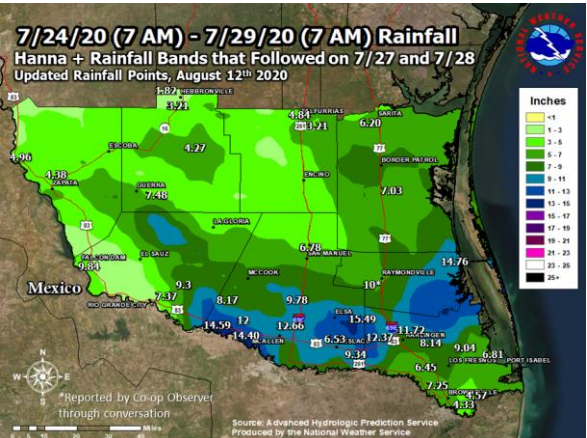
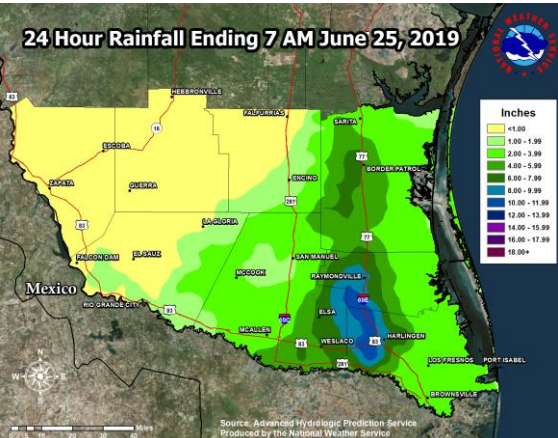
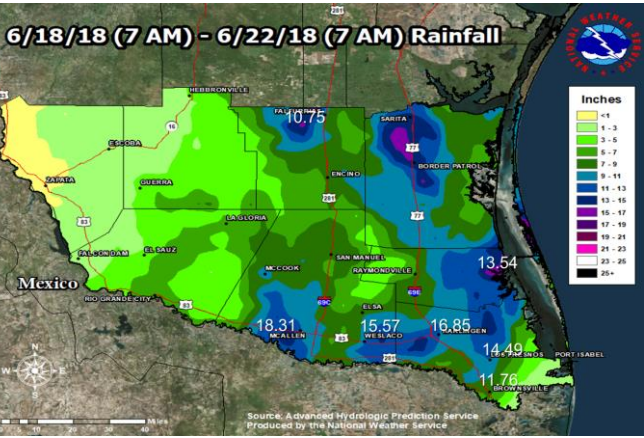
Generated 6/15/2012 at HPRCC using provisional data. Regional Climate Centers



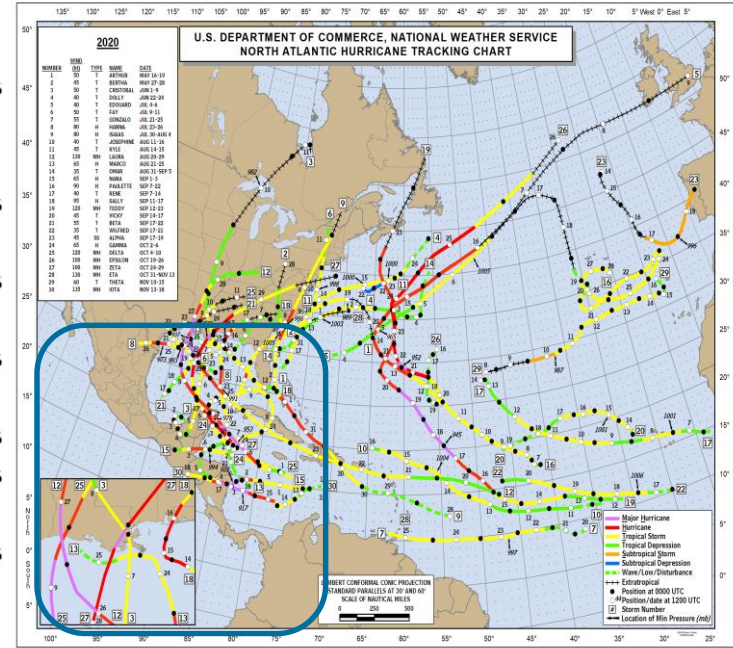
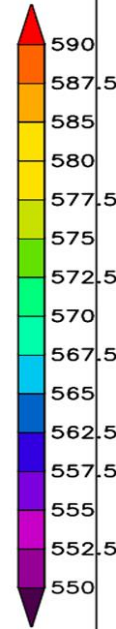
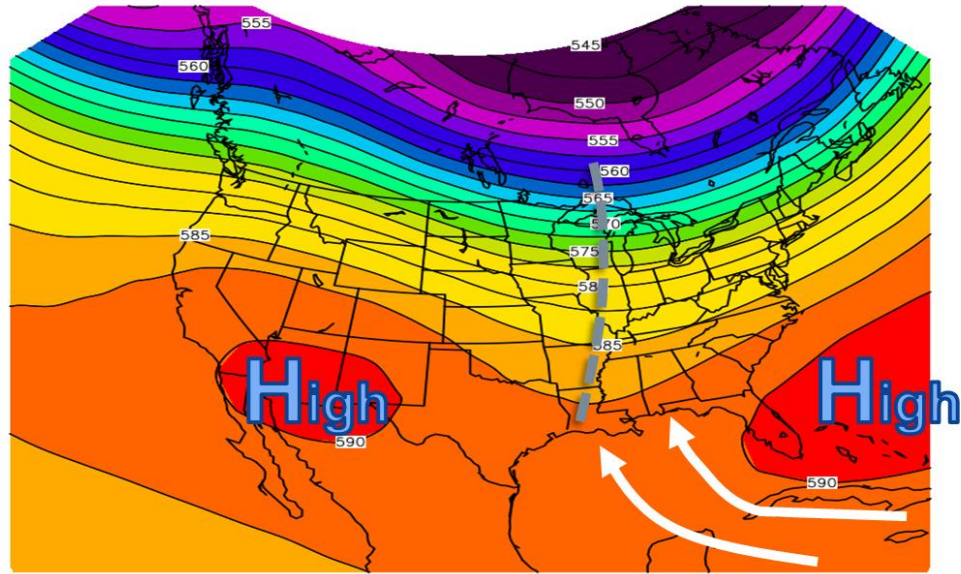
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Wildcard: Fourth Year in a Row?



The pattern of 2020: Could it repeat in 2021?



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In Summary: Impacts and Actions

- Drought and Wildfire Growth Potential Are Removed from the July-September Potential
- Seasonable Conditions are Generally Forecast through September. This means:
 - **Dangerous but “typical” summer heat** (“feels like” temperatures 105 to 108+) at times, especially in July and August. A few days **could exceed 111**, depending on rainfall in early to mid July.
 - **Flooding rains**, from tropical waves to potential cyclones (depressions to hurricanes). That opportunity is anytime a wave approaches.
- Should the upper ridge settle farther west, the door would open for an occasional influx of deep tropical moisture.
- The Gulf is likely to be **tropically active again in 2021**. Unknown is what the tropics might do along the Texas/northeast Mexico coast, as it only takes one cyclone to make a season – even if the pattern favors other locations along the Gulf coast.
- **Residents should prepare equally for flooding rains, heat, and the potential for tropical cyclone winds.**



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